limitations of the base claims and any intervening claims. Claim 7 depends from claim 1, and is allowable for at least the reasons set forth below.

C. Rejection of Claim 1 Under 35 U.S.C. § 103(a) Over JP 09-171631, Noda et al., and JP 11-096576

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 09-171631 (JP '631) in view of Noda et al. (US 6,097,746), and further in view of JP 11-096576 (JP '576). This rejection is respectfully traversed.

1. Limitations Not Disclosed, Taught, or Suggested by References

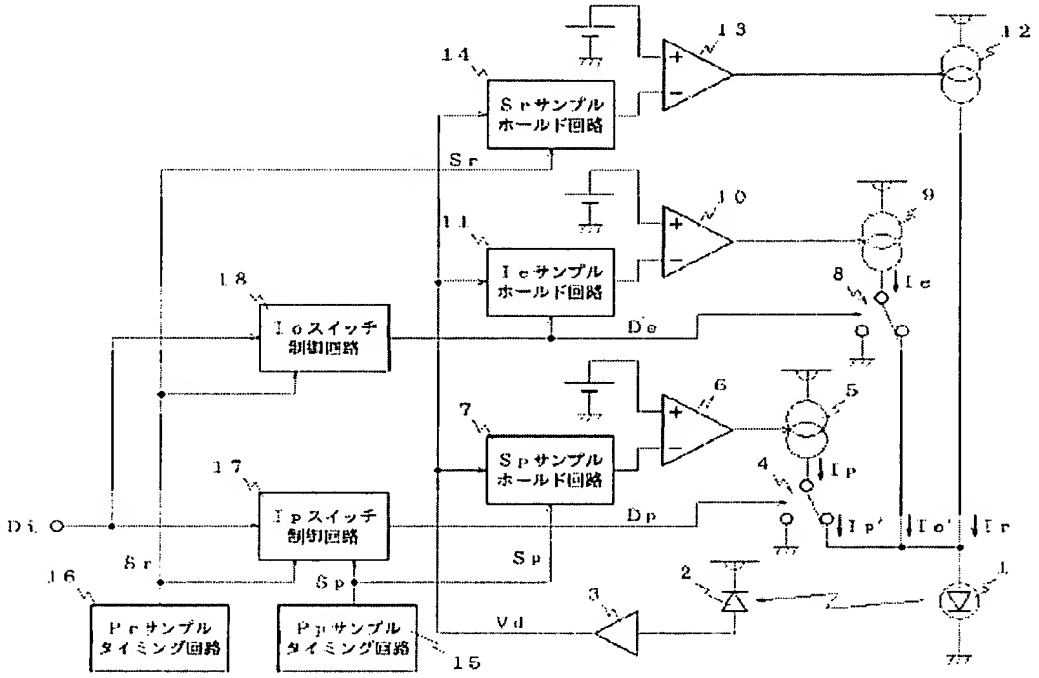
In order to establish a *prima facie* case of obviousness "the prior art reference (or references when combined) must teach or suggest all the claim limitations." M.P.E.P. §2142. None of JP '631, Noda et al., nor JP '576, even when considered in combination, teach or suggest all limitations of claim 1.

i. JP '631

Claim 1 recites an optical recording/reproducing apparatus comprising, *inter alia*, "a semiconductor laser driver supplying a selected one of a plurality of drive currents ... to the semiconductor laser ...; [and] a current driver selectively outputting one of a plurality of increment currents to the laser driver" (emphasis added). Applicant respectfully submits that JP '631 does not teach or suggest these limitations.

To the contrary, JP '631 teaches an optical recording/reproducing apparatus in which three separate signals (Ir, Ie, and Ip) are generated from Ir current source 12, Ie current source 9, and Ip current source 5. JP '631 FIG. 1 (reproduced below). In JP '631, the current sources (Ir, Ie, and Ip) are supplied only to the laser diode 1. The current sources (Ir, Ie, and Ip) are only supplied to the laser, and there is no disclosure of one of a plurality of current sources supplied to a laser driver.

Although the Office Action takes the position that "the laser drive signal is appropriately 'incremented'" (Office Action p. 2), JP '631 does not disclose a laser driver as claimed, but discloses only that three separate current sources (Ir, Ie, and Ip) are supplied to the laser 1. Therefore, Applicant respectfully submits that JP '631 does not disclose, teach, or suggest one of a plurality of currents supplied to a laser, combined with one of a plurality of currents supplied to a laser driver as recited in claim 1.



JP '631 FIG. 1

Nor are Noda et al. or JP '576 cited for these limitations. Thus, Noda et al. and JP '576 do not remedy the deficiencies of JP '631.

ii. JP '576

Furthermore, claim 1 recites "using a laser driving current waveform ... a detection unit detecting a first power sample signal, at a first sampling point of the

waveform, from the laser beam ..., [and] detecting a second power sample signal, at a second sampling point of the waveform, from the laser beam ...; and a calculation unit calculating a derivative efficiency of the laser based on the first and second power sample signals detected by the detection unit, so that the drive currents of the laser driver, supplied to the laser, are controlled based on the calculated derivative efficiency" (emphasis added). Applicant respectfully submits that JP '576 does not teach or suggest these limitations.

To the contrary, JP '576 discloses that "the beam output value then is ... made ... P1. The beam output value when the voltage subtracting an efficiency measuring differential amount α from the output voltage I ... is made P2, and the differential efficiency η is calculated from the P1 and P2." Abstract (emphasis added). P2 is generated from a subtraction operation, not from a power sample signal at a second point in a laser driving current waveform.

Therefore, Applicant respectfully submits that JP '576 does not disclose, teach, or suggest detecting a first power sample signal, at a first sampling point of the waveform, from the laser beam and detecting a second power sample signal, at a second sampling point of the waveform, from the laser beam and calculating a derivative efficiency of the laser based on the first and second power sample signals as recited in claim 1.

Nor are Noda et al. or JP '631 cited for these limitations. Thus, Noda et al. and JP '631 do not remedy the deficiencies of JP '576.

2. No Motivation to Combine References

The Office Action admits that JP '631 does not teach or disclose "another or as claimed 'special' power setting process." Office Action at 2. Instead, the Office Action asserts that "Noda et al. teaches a different operational consideration," to allegedly

arrive at the claimed invention. Office Action at 3. Neither reference discloses, teaches, or suggests an automatic power control process combined with a special power setting process as recited in claim 1. The Office Action has not applied the proper test for obviousness; accordingly, the Office Action fails to make a *prima facie* case of obviousness.

Applicants respectfully submit that there is no motivation to combine the cited references to obtain the invention of claim 1. Motivation or suggestion to combine or modify prior art references "must be clear and particular, and it must be supported by actual evidence." *Teleflex, Inc. v. Ficosa North America Corp.*, 299 F.3d 1313, 1334 (Fed. Cir. 2002). Because the "genius of invention is often a combination of known elements which in hindsight seems preordained," the Federal Circuit requires a "rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1351 (Fed. Cir. 2001). Yet there is no teaching or suggestion within any of the references that provide a motivation to combine them.

Courts have generally recognized that a showing of a *prima facie* case of obviousness necessitates three requirements: (i) some suggestion or motivation, either in the references themselves or in the knowledge of a person of ordinary skill in the art, to modify the reference or combine the reference teachings; (ii) a reasonable expectation of success; and (iii) the prior art references must teach or suggest all claim limitations. *See e.g., In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999); *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998); MPEP §§ 706.02(j) and 2143 *et seq.* Furthermore, the "[t]he teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)." MPEP §706.02(j).

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). Thus, a showing of an obvious combination requires more than just an amalgam of references, each of which provides one feature of the claimed invention.

The Office Action has done no more than cite a group of references, each of which allegedly provides only part of the claimed invention, and allege that their combination renders the invention obvious. It simply lists two different laser operations, from two different references (JP '631 and Noda et al.), and asserts that they should be combined. However, without the benefit of hindsight, there would have been no motivation to combine these references and the Office Action has failed to provide proof of any such motivation.

Since JP '631, Noda et al., and JP '576 do not teach or suggest all of the limitations of claim 1, and is there no objective motivation to combine the references, claim 1 is not obvious over the cited references. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claim 1 be withdrawn.

D. Rejection of Claim 1 Under 35 U.S.C. § 103(a) Over Shigemori, Miyagawa et al., and JP 11-096576

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Shigemori (US 6,400,673) in view of Miyagawa et al. (US 6,684,836), and further in view of JP '576. This rejection is respectfully traversed.

1. Miyagawa et al. Disqualified as Prior Art

Regarding Miyagawa et al., since the WIPO publication was made in a language other than English, the international filing date is not a U.S. filing date for prior art

purposes under 35 U.S.C. 102(e). M.P.E.P. §706.02(i). Miyagawa et al. was filed in the United States on December 5, 2001, as shown on the face of the patent as the 35 U.S.C. § 371(c) date. Therefore, for 102(e) purposes, the effective filing date is December 5, 2001. The present application was filed on May 9, 2001. Therefore, Miyagawa et al., having a 102(e) date of December 5, 2001, is not prior art with respect to this application. In addition, the present application is a continuation-in-part of U.S. Patent Application No. 09/621,542, filed on July 21, 2000, which is earlier than even Miyagawa et al.'s PCT filing date of February 9, 2001. Accordingly, Applicant respectfully submits that this rejection is improper and should be removed by the Examiner.

2. Shigemori Disqualified as Prior Art

Applicant respectfully submits that Shigemori is not a proper prior art reference under 35 U.S.C. § 103(a).

The effective filing date of the present application, and not that of Shigemori, determines whether 35 U.S.C. § 103(c)(1) applies. Although the Office Action responded to Applicant's argument by stating that "35 U.S.C. § 103(c)(1) does not affect any application filed before November 29, 1999" (emphasis added), it should be noted that the present application was filed on May 9, 2001. "For applications filed on or after November 29, 1999 or pending on or after December 10, 2004, a provisional rejection under 35 U.S.C. 103(a) using prior art under 35 U.S.C. 102(e) is not proper if ... the application and the prior art reference were ... subject to an obligation of assignment to the same person, at the time the invention was made." M.P.E.P. § 2136.01 (emphasis added).

According to M.P.E.P. § 706.02(l)(1)(I), "the provision of 35 U.S.C. 103(c)(1) is effective for all applications pending on or after December 10, 2004, including applications filed prior to November 29, 1999" (emphasis added). M.P.E.P. § 706.02(l),

cited by the Office Action, refers only to "applications filed prior to November 29, 1999" and "the subject matter that is disqualified as prior art" for the claimed invention, not the filing date of proposed prior art references (emphasis added). "Enacted on November 29, 1999, the American Inventors Protection Act (AIPA) added subject matter which was prior art under former 35 U.S.C. 103 via 35 U.S.C. 102(e) as disqualified prior art against the claimed invention." M.P.E.P. § 706.02(l)(1)(I) (emphasis added). Therefore, the filing date of Shigemori is irrelevant as to whether 35 U.S.C. § 103(c)(1) applies.

U.S. Patent No. 6,400,673 ("Shigemori") was filed on December 16, 1998, and issued on June 4, 2002. As stated above, the present application was filed on May 9, 2001. As a result, Shigemori qualifies as prior art only under 35 U.S.C. § 102(e). The subject matter of Shigemori and of the claimed invention were, at the time the invention was made, subject to an obligation of assignment to the same entity: Ricoh Company, Ltd. The Assignment for this application was recorded in the PTO on September 4, 2001 at Reel 012135, Frame 0531. The Assignee of Shigemori is Ricoh Company, Ltd., which was recorded in the PTO on February 12, 1999 on Reel 9758, Frame 0732. Therefore, 35 U.S.C. § 103(c) is applicable to the present situation.

According to MPEP § 706.02(l)(1), "[e]ffective November 29, 1999, subject matter which was prior art under former 35 U.S.C. 103 via 35 U.S.C. 102(e) is now disqualified as prior art against the claimed invention if that subject matter and the claimed invention 'were, at the time the invention was made, . . . subject to an obligation of assignment to the same person.'" Accordingly, Shigemori is not a valid prior art reference and should be excluded under 35 U.S.C. § 103.

Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claim 1 be withdrawn.

E. Rejection of Claim 1 Under 35 U.S.C. § 103(a) Over Miyagawa et al., and JP 11-096576

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Miyagawa et al. in view of JP '576. This rejection is respectfully traversed. As discussed above, this application was filed on May 9, 2001. Therefore, Miyagawa et al., having a 102(e) date of December 5, 2001, is not prior art with respect to this application. Accordingly, Applicant respectfully submits that the rejection with respect to Miyagawa et al. is improper and should be removed by the Examiner.

F. Rejection of Dependent Claims

1. Claims 2-6

Claims 2-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '631 in view of Noda et al., and further in view of JP '576, and still further in view of Yokoi et al. (US 5,732,062); Shigemori in view of Miyagawa et al., and further in view of JP '576, and still further in view of Yokoi et al.; or Miyagawa et al. in view of JP '576, and further in view of Yokoi et al. This rejection is respectfully traversed. Claims 2-6 depend from claim 1 and are patentable at least for the reasons mentioned above.

2. Shigemori Disqualified as Prior Art

As discussed above, Shigemori was filed on December 16, 1998, and issued on June 4, 2002; the present application was filed on May 9, 2001. As a result, Shigemori qualifies as prior art only under 35 U.S.C. § 102(e). The subject matter of Shigemori and of the claimed invention were, at the time the invention was made, subject to an obligation of assignment to the same entity. Accordingly, 35 U.S.C. § 103(c) is applicable to the present situation. Applicant respectfully submits that the rejection with respect to Shigemori is improper and should be removed by the Examiner.

3. Miyagawa et al. Disqualified as Prior Art

As discussed above, the present application was filed on May 9, 2001. Therefore, Miyagawa et al., having a 102(e) date of December 5, 2001, is not prior art with respect to this application. Accordingly, Applicant respectfully submits that the rejection with respect to Miyagawa et al. is improper and should be removed by the Examiner.

4. No Motivation to Combine References

In addition, regarding the rejections over JP '631/Noda et al./JP '576/Yokoi et al. and Shigemori/Miyagawa et al./JP '576/Yokoi et al.; the "requisite prior art suggestion to combine becomes less plausible when the necessary elements can only be found in a large number of references. . . ." *Eli Lilly & Co. v. Teva Pharms. USA, Inc.*, 2004 U.S. Dist. LEXIS 14724 at *104; 2 *Chisum on Patents* § 5.04[1][e][vi]. In the present application, the lack of identifiable objective motivation to combine the four references, in addition to the sheer number of disparate references applied by the Office Action, is sufficient to overcome the asserted obviousness arguments. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 2-6 be withdrawn.

G. Rejection of Claims 8 and 10-11

Claims 8 and 10-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '631 in view of Noda et al., and further in view of JP '576, and still further in view of Yokoi et al.; Shigemori in view of Miyagawa et al., and further in view of JP '576, and still further in view of Yokoi et al.; or Miyagawa et al. in view of JP '576, and further in view of Yokoi et al. This rejection is respectfully traversed. Claims 8 and 10-11 depend from claim 1 and are patentable at least for the reasons mentioned above.

1. Shigemori Disqualified as Prior Art

As discussed above, Shigemori was filed on December 16, 1998, and issued on June 4, 2002; the present application was filed on May 9, 2001. As a result, Shigemori qualifies as prior art only under 35 U.S.C. § 102(e). The subject matter of Shigemori and of the claimed invention were, at the time the invention was made, subject to an obligation of assignment to the same entity. Accordingly, 35 U.S.C. § 103(c) is applicable to the present situation. Applicant respectfully submits that the rejection with respect to Shigemori is improper and should be removed by the Examiner.

2. Miyagawa et al. Disqualified as Prior Art

As discussed above, the present application was filed on May 9, 2001. Therefore, Miyagawa et al., having a 102(e) date of December 5, 2001, is not prior art with respect to this application. Accordingly, Applicant respectfully submits that the rejection with respect to Miyagawa et al. is improper and should be removed by the Examiner.

3. No Motivation to Combine References

In addition, regarding the rejections over JP '631/Noda et al./JP '576/Yokoi et al. and Shigemori/Miyagawa et al./JP '576/Yokoi et al., the lack of identifiable objective motivation to combine the four references, in addition to the sheer number of disparate references applied by the Office Action, is sufficient to overcome the asserted obviousness arguments.

Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 8 and 10-11 be withdrawn.

H. Rejection of Claim 9

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '631 in view of Noda et al., further in view of JP '576, and further in view of Yokoi et al., and still further in view of Gyo (US 6,738,339); Shigemori in view of Miyagawa et al., further in view of JP '576, and further in view of Yokoi et al., and still further in view of Gyo; or Miyagawa et al. in view of JP '576, and further in view of Yokoi et al., and still further in view of Gyo. This rejection is respectfully traversed. Claim 9 depends from claim 1 and is patentable at least for the reasons mentioned above.

1. Gyo Disqualified as Prior Art

Furthermore, the filing date of Gyo is February 5, 2001. The priority date of this application is at least July 24, 2000, based on the latest of the claimed priority documents, Japanese Patent Application No. 2000-222428. Therefore, Applicant respectfully submits that Gyo is not prior art to this application, and the rejection should be withdrawn.

2. Shigemori Disqualified as Prior Art

As discussed above, Shigemori was filed on December 16, 1998, and issued on June 4, 2002; the present application was filed on May 9, 2001. As a result, Shigemori qualifies as prior art only under 35 U.S.C. § 102(e). The subject matter of Shigemori and of the claimed invention were, at the time the invention was made, subject to an obligation of assignment to the same entity. Accordingly, 35 U.S.C. § 103(c) is applicable to the present situation. Applicant respectfully submits that the rejection with respect to Shigemori is improper and should be removed by the Examiner.

3. Miyagawa et al. Disqualified as Prior Art

As discussed above, the present application was filed on May 9, 2001. Therefore, Miyagawa et al., having a 102(e) date of December 5, 2001, is not prior art with respect to this application. Accordingly, Applicant respectfully submits that the rejection with respect to Miyagawa et al. is improper and should be removed by the Examiner.

4. No Motivation to Combine References

In addition, regarding the rejections over JP '631/Noda et al./JP '576/Yokoi et al./ Gyo and Shigemori/Miyagawa et al./JP '576/Yokoi et al./Gyo, the lack of identifiable objective motivation to combine the five references, in addition to the sheer number of disparate references applied by the Office Action, is sufficient to overcome the asserted obviousness arguments. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claim 9 be withdrawn.

I. Rejection of Claims 12 and 14-15

Claims 12 and 14-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '631 in view of Noda et al., and further in view of JP '576, and still further in view of Yokoi et al.; Shigemori in view of Miyagawa et al., and further in view of JP '576, and still further in view of Yokoi et al.; or Miyagawa et al. in view of JP '576, and further in view of Yokoi et al. This rejection is respectfully traversed. Claims 12 and 14-15 depend from claim 1 and are patentable at least for the reasons mentioned above.

1. Shigemori Disqualified as Prior Art

As discussed above, Shigemori was filed on December 16, 1998, and issued on June 4, 2002; the present application was filed on May 9, 2001. As a result, Shigemori qualifies as prior art only under 35 U.S.C. § 102(e). The subject matter of Shigemori and

of the claimed invention were, at the time the invention was made, subject to an obligation of assignment to the same entity. Accordingly, 35 U.S.C. § 103(c) is applicable to the present situation. Applicant respectfully submits that the rejection with respect to Shigemori is improper and should be removed by the Examiner.

2. Miyagawa et al. Disqualified as Prior Art

As discussed above, the present application was filed on May 9, 2001. Therefore, Miyagawa et al., having a 102(e) date of December 5, 2001, is not prior art with respect to this application. Accordingly, Applicant respectfully submits that the rejection with respect to Miyagawa et al. is improper and should be removed by the Examiner.

3. No Motivation to Combine References

In addition, regarding the rejections over JP '631/Noda et al./JP '576/Yokoi et al. and Shigemori/Miyagawa et al./JP '576/Yokoi et al., the lack of identifiable objective motivation to combine the four references, in addition to the sheer number of disparate references applied by the Office Action, is sufficient to overcome the asserted obviousness arguments. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claims 12 and 14-15 be withdrawn.

J. Rejection of Claim 13

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '631 in view of Noda et al., further in view of JP '576, and further in view of Yokoi et al., and still further in view of Gyo; Shigemori in view of Miyagawa et al., further in view of JP '576, and further in view of Yokoi et al., and still further in view of Gyo; or Miyagawa et al. in view of JP '576, further in view of Yokoi et al., and still further in view of Gyo. This rejection is respectfully traversed. Claim 13 depends from claim 1 and is patentable at least for the reasons mentioned above.

1. Gyo Disqualified as Prior Art

Furthermore, the filing date of Gyo is February 5, 2001. The priority date of this application is at least July 24, 2000, based on the latest of the claimed priority documents, Japanese Patent Application No. 2000-222428. Therefore, Applicant respectfully submits that Gyo is not prior art to this application, and the rejection should be withdrawn.

2. Shigemori Disqualified as Prior Art

As discussed above, Shigemori was filed on December 16, 1998, and issued on June 4, 2002; the present application was filed on May 9, 2001. As a result, Shigemori qualifies as prior art only under 35 U.S.C. § 102(e). The subject matter of Shigemori and of the claimed invention were, at the time the invention was made, subject to an obligation of assignment to the same entity. Accordingly, 35 U.S.C. § 103(c) is applicable to the present situation. Applicant respectfully submits that the rejection with respect to Shigemori is improper and should be removed by the Examiner.

3. Miyagawa et al. Disqualified as Prior Art

As discussed above, the present application was filed on May 9, 2001. Therefore, Miyagawa et al., having a 102(e) date of December 5, 2001, is not prior art with respect to this application. Accordingly, Applicant respectfully submits that the rejection with respect to Miyagawa et al. is improper and should be removed by the Examiner.

4. No Motivation to Combine References

In addition, regarding the rejections over JP '631/Noda et al./JP '576/Yokoi et al./ Gyo and Shigemori/Miyagawa et al./JP '576/Yokoi et al./Gyo, the lack of identifiable objective motivation to combine the five references, in addition to the sheer number of disparate references applied by the Office Action, is sufficient to overcome the asserted

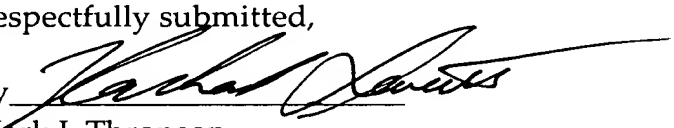
obviousness arguments. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection of claim 13 be withdrawn.

K. Conclusion

If the rejections based on , the Examiner is requested to provide a full translation of the documents in accordance with M.P.E.P. § 706.02(II), and not only a machine-assisted translation, especially in light of the Examiner's use of "interpretation" of contested terminology. In view of the above, Applicant believes the pending application is in condition for allowance.

Dated: October 20, 2006

Respectfully submitted,

By 

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